

## REMARKS

The claims are 10 to 13.

The above amendment presents claims which were accepted in the Japanese basic application and the corresponding Chinese and European applications. The Japanese and Chinese applications have already proceeded to grant.

Support for the above amendment is evident from the specification as a whole e.g. pages 4 and 5.

Claims 1 to 9 have been rejected under 35 U.S.C. 103(a) as being unpatentable over the English abstract of Korean patent 2002-008854.

This rejection is respectfully traversed.

The chemical composition, thickness of the nitride layer and fatigue limit of the new claims are not disclosed or taught by the Korean patent or the other references, as discussed below.

The English abstract of Korean patent 2002-008854 discloses inclusion of chemical elements other than C, Mn, Si, P and Fe. Further, the upper limit of P, 0.03%, that is disclosed in this reference is below 0.035 mass% that is recited as a lower limit in new claim 12. In addition, neither thickness of the nitride layer nor fatigue limit that is recited in new claim 10 is disclosed or suggested.

Accordingly the rejection on the Korean patent is clearly untenable.

Claims 1 to 9 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese patent 10-306343.

This rejection is also respectfully traversed.

There is nothing in JP 10-306343 regarding fatigue limit of the steel that is recited in new claim 10. Thickness of the nitride layer that is disclosed in this reference is 0.23-0.35 mm which is much below the lower limit of thickness of the nitride layer of new claim 10 and therefore fatigue limit of new claim 10 would not be realized according to the disclosure of this reference.

In addition, the composition disclosed in this reference includes Ni. In the present application, an alloy element such as Ni should be avoided in the chemical composition because it is detrimental at the time of recycling. See paragraph 1, page 2 of the present specification. Further, the upper limit of P that is disclosed in this reference is 0.015 mass%, which is below the

lower limit of 0.035 mass%. Further, there is no evidential data in this reference as to 3 or 1  $\mu\text{m}$  or lower of a ferrite average grain size. Only 12-30  $\mu\text{m}$  for a ferrite average grain size is listed in Table 1 of this reference.

Thus, the rejection on JP 10-306343 is untenable.

Claims 1 to 9 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese patent 9-291339.

This rejection is also respectfully traversed.

Japanese patent 9-291339 discloses a chemical composition including Cr as an alloy element that should be avoided in the presently claimed compositions. Further, P is not disclosed or suggested in this reference. The ferrite grain size number of No. 5 or above that is disclosed in this reference corresponds to 70  $\mu\text{m}$  or less. There is no reasonable and decisive basis in this reference that 3 or 1  $\mu\text{m}$  or less of a ferrite average grain size is realized. Thickness of the nitride layer of new claim 10 is not disclosed or suggested by this reference.

Only 0.01-0.11mm thickness is listed in Table 2 of this reference.

Fatigue limits, 345-403 MPa, disclosed in this reference are not within the range encompassed by new claim 10.

Consequently, this reference does not render the steel claimed in new claims 10 to 13 obvious to one skilled in the art.

With regard to the objection to the specification on page 7, this has been corrected by the above amendment.


With regard to the Examiner's refusal to consider three of the references cited in the Information Disclosure Statement filed April 13, 2005, copies of such references are enclosed with an Information Disclosure Statement.

No further issues remaining, allowance of this application is respectfully requested.

If the Examiner has any comments or proposals for expediting prosecution, please contact undersigned at the telephone number below.

Respectfully submitted,

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